at least a first voltage changing process for applying a voltage in a direction that increases a volume of said pressure generating chamber;

a second voltage changing process for then applying a voltage in a direction that reduces the volume of said pressure generating chamber; and

a third voltage changing process for applying a voltage in a direction that increases the volume of said pressure generating chamber again;

setting voltage changing times t_2 and t_3 during the second and third voltage changing processes so as to have such lengths as shown below, relative to a resonance frequency T_c of a pressure wave generated in the pressure generating chamber:

$0 < t_2 < T_c/2$

$0 < t_3 < T_c/2$; and

providing said nozzle with an about 20 to about 40 μm opening diameter to eject said ink droplets in a size of about 5 to about 25 μm size.- -

- - 19. (Newly Added) A method for driving an ink jet recording head, comprising:

applying a driving voltage to an electro-mechanical converter to deform the electro-mechanical converter to thereby change a pressure in the pressure generating chamber filled with ink, thus ejecting ink droplets through a nozzle in communication with the pressure generating chamber, wherein said applying of said driving voltage comprises:

at least a first voltage changing process for applying a voltage in a direction that increases a volume of said pressure generating chamber;

a second voltage changing process for then applying a voltage in a direction that reduces the volume of said pressure generating chamber;

a third voltage changing process for applying a voltage in a direction that increases the volume of said pressure generating chamber again; and

setting voltage changing times t_2 and t_3 during the second and third voltage changing processes are set to have such lengths as shown below, relative to a resonance frequency T_c of a pressure wave generated in the pressure generating chamber:

$0 < t_2 < T_c/2$

$0 < t_3 < T_c/2$; and

providing said nozzle with an about 20 to about 40 μm opening diameters to eject said ink droplets in a size of about 5 to about 25 μm size, wherein a start time of said third voltage changing process is about the same as an end time of said second voltage changing process.- -

- - 20. (Newly Added) A method for driving an ink jet recording head, comprising

applying a driving voltage to an electro-mechanical converter to deform the electro-mechanical converter to thereby change a pressure in the pressure generating chamber filled with ink, thus ejecting ink droplets through a nozzle in communication with the pressure generating chamber, wherein said applying said driving voltage comprises:

at least a first voltage changing process for applying a voltage in a direction that increases a volume of said pressure generating chamber;

a second voltage changing process for then applying a voltage in a direction that reduces the volume of said pressure generating chamber; and

a third voltage changing process for applying a voltage in a direction that increases the volume of said pressure generating chamber again;

a fourth voltage changing process for applying voltage in a direction that reduces the voltage of said pressure generating chamber, after said first voltage changing process, said second voltage changing process, and said third voltage changing process;

setting voltage changing times t_2 and t_3 during the second and third voltage changing processes so as to have such lengths as shown below, relative to a resonance frequency T_c of a pressure wave generated in the pressure generating chamber:

$0 < t_2 < T_c/2$

$0 < t_3 < T_c/2$; and

providing said nozzle with an about 20 to about 40 μm opening diameter to eject said ink droplets in a size of about 5 to about 25 μm size.- -

- - 21. (Newly Added) A method for driving an ink jet recording head comprising:

applying a driving voltage to an electro-mechanical converter to deform the electro-mechanical converter to thereby change a pressure in the pressure generating chamber filled with ink, thus ejecting ink droplets through a nozzle in communication with the pressure generating chamber, wherein said applying said driving voltage comprises:

at least a first voltage changing process for applying a voltage in a direction that increases a volume of said pressure generating chamber;

a second voltage changing process for then applying a voltage in a direction that reduces the volume of said pressure generating chamber; and

a third voltage changing process for applying a voltage in a direction that increases the volume of said pressure generating chamber again;

setting voltage changing times t_2 and t_3 during the second and third voltage changing processes are set to have such lengths as shown below, relative to a resonance frequency T_c of a pressure wave generated in the pressure generating chamber:

$0 < t_2 < T_c/2$

$0 < t_3 < T_c/2$; and

providing said a nozzle with an about 20 to about 40 μm opening diameter to eject said ink droplets in a size of about 5 to about 25 μm size,

wherein the voltage waveform of said driving voltage includes a fourth voltage changing process for applying a voltage in a direction that reduces the volume of said pressure generating chamber, after said first voltage changing process, said second voltage changing process, and said third voltage changing process,

wherein a voltage changing time t_4 during said fourth voltage changing process is set as follows relative to the resonance frequency T_c of the pressure wave generated in said pressure generating chamber:

$0 < t_4 < T_c/2$.-

- - 22. (Newly Added) A method for driving an ink jet recording head comprising:

applying a driving voltage to an electro-mechanical converter to deform the electro-mechanical converter to thereby change a pressure in the pressure generating chamber filled with ink, thus ejecting ink droplets through a nozzle in communication with the pressure generating chamber, wherein said applying said driving voltage comprises:

at least a first voltage changing process for applying a voltage in a direction that increases a volume of said pressure generating chamber;

a second voltage changing process for then applying a voltage in a direction that reduces the volume of said pressure generating chamber; and

a third voltage changing process for applying a voltage in a direction that increases the volume of said pressure generating chamber again;

voltage changing times t_2 and t_3 during the second and third voltage changing processes are set to have such lengths as shown below, relative to a resonance frequency T_c of a pressure wave generated in the pressure generating chamber:

$0 < t_2 < T_c/2$

$0 < t_3 < T_c/2$; and

providing said a nozzle with an about 20 to about 40 μm opening diameter to eject said ink droplets in a size of about 5 to about 25 μm size,

wherein the voltage waveform of said driving volume includes a fourth voltage changing process for applying a voltage in a direction that reduces the volume of said pressure generating